



May 28, 2015

TO ALL UTILITY COMMISSION MEMBERS:

GERRY WARNER
BOB MULLEN
JERRY FREY
DAN CASEY
PAT BECKER

This is to inform you that there will be a Utility Commission Meeting on **June 3, 2015 at 3:30 p.m.** in the Administrator's office at the Civic Center.

AGENDA:

1. Call to order
2. Adoption of agenda
3. Approval of previous commission meeting minutes
4. Approval of bills and disbursements – May 2015
5. Public Comment
6. 2006 \$2,160,000 Electric Utility Revenue Bond Options, Sean Lentz, Ehlers & Associates
7. Wastewater Facility Planning Proposals
8. South Water Tower Reconditioning – Clean Water Fund Loan
9. Staff Reports
10. Communications and miscellaneous correspondence
11. Adjourn

A handwritten signature in black ink, appearing to read "Mike Darrow", is positioned above the printed name and title.

Mike Darrow
Utility Manager

A majority of the members of the New Richmond City Council may be present at the above meeting.

Pursuant to State ex rel. Badke v. Greendale Village Board, 173 Wis. 2d 553, 494 N.W. 2nd 408 (1993) such attendance may be considered a meeting of the City Council and must be noticed as such, although the Council will not take action at this meeting.

New Richmond Utilities

May 2015 Check Register

Check #	Date	Amount	Vendor Name	Description
000681	5/1/2015	58,905.19	CITY OF NEW RICHMOND	PAYROLL 5/1/15
000682	5/6/2015	83,550.00	LOCAL GOVERNMENT INVESTMENT POOL	MAY15 INVESTMENT
000683	5/6/2015	29,000.00	LOCAL GOVERNMENT INVESTMENT POOL	MAY15 INVESTMENT
000684	5/15/2015	7,160.00	LOCAL GOVERNMENT INVESTMENT POOL	APR15 WATER IMPACT & SAC
000685	5/12/2015	206.62	AUTO VALUE NEW RICHMOND	AIR FARM, OIL, FUEL FARM, HYDR
000686	5/12/2015	2,498.03	CITY OF NEW RICHMOND	MONTHLY BILL
000687	5/12/2015	5,112.99	CITY OF NEW RICHMOND	INSURANCE
000688	5/12/2015	2,500.00	CITY OF NEW RICHMOND	RENT
000689	5/12/2015	7,350.54	CITY OF NEW RICHMOND	RECYCLING
000690	5/12/2015	21,554.20	CITY OF NEW RICHMOND	STORM WATER
000691	5/12/2015	7,250.66	DAKOTA SUPPLY GROUP INC	ERT 60W SENSUS REMOTE
000692	5/12/2015	17.88	HUEBSCH	SLATE MAT
000693	5/12/2015	2,037.56	INFOSEND, INC	APRIL BILLING & POSTAGE
000694	5/12/2015	320.00	MUNICIPAL ELECTRIC UTIL OF WI	JOB TRAINING & SAFETY-KNUTSON
000695	5/12/2015	250.00	MUNITECH INC	CLEAN & TEST WELL #6
000696	5/12/2015	393.58	NORTH CENTRAL LABORATORIES INC	SULFURIC ACID, AMMONIA
000697	5/12/2015	125.95	NEW RICHMOND ELECTRONICS	PANASONIC DUAL HANDSET
000698	5/12/2015	5,383.94	NEW RICHMOND UTILITIES	APR CTC COLLECTIONS
000699	5/12/2015	195.11	QUILL	PAPER, PENS, STAPLES
000700	5/15/2015	58,281.44	CITY OF NEW RICHMOND	PAYROLL 5/15/15
000701	5/19/2015	11,939.43	WI DEPT OF REVENUE	APR15 SALES TAX
000702	5/28/2015	594,356.22	WISCONSIN PUBLIC POWER INC	APR15 PURCHASED POWER
000703	5/21/2015	42,534.42	CITY OF NEW RICHMOND	MAY TAX EQUIVALENT
000704	5/21/2015	1,620.00	COMMERCIAL TESTING LABORATORY	COLIFORM BACT, PHOSPHOROUS, BOD
000705	5/21/2015	17.26	FASTENAL COMPANY	GLOVES
000706	5/21/2015	760.00	HYDRODESIGNS	CROSS CONNECT INSPECTION
000707	5/21/2015	82.66	NORTH CENTRAL LABORATORIES INC	BUFFERED DIL WATER FOR FECALS
000708	5/21/2015	20.00	WISCONSIN STATE LAB OF HYGIENE	FLUORIDE TESTING
000709	5/27/2015	92.62	CITY OF NEW RICHMOND	BEN EXTRAS-HRA MO ADMIN FEES
000710	5/27/2015	26.00	CITY OF NEW RICHMOND	BEN EXTRAS-MONTHLY FSA
000711	5/27/2015	469.45	CITY OF NEW RICHMOND	DISABILITY INSURANCE
000712	5/27/2015	23,235.73	CITY OF NEW RICHMOND	HEALTH INSURANCE
000713	5/27/2015	35.47	CITY OF NEW RICHMOND	LIFE INSURANCE
000714	5/27/2015	179.24	NANCY PETERSEN	REIMBURSE WPPI BOARD MTG 5/15
000715	5/27/2015	57,729.62	CITY OF NEW RICHMOND	PAYROLL 5/29/15
033700	5/6/2015	30.00	WVOA	WVOA REGIONAL MTG - S SKINNER
033701	5/12/2015	3,830.00	BAKER TILLY VIRCHOW KRAUSE LLP	FINANCIAL STATEMENT AUDIT
033702	5/12/2015	257.12	BALDWIN TELCOMM	APRIL PHONE BILL
033703	5/12/2015	621.47	BORDER STATES ELECTRIC SUPPLY	PADLOCK REGULAR
033704	5/12/2015	0.00	DOYLE'S FARM & HOME INC	STUB CHECK
033705	5/12/2015	310.31	DOYLE'S FARM & HOME INC	BATTERIES, TISSUE, OIL, BLADE
033706	5/12/2015	412.30	DUANE W NIELSEN COMPANY	CALIBRATE OCM'S
033707	5/12/2015	4,094.46	ENERGIS HIGH VOLTAGE RESOURCES	ANNUAL SUBSTATION MAINTENANCE
033708	5/12/2015	409.00	ENGINEER PROPULSION SYSTEM	REFUND EMBEDDED COST
033709	5/12/2015	18.96	FAMILY FRESH MARKET	DISTILLED WATER
033710	5/12/2015	2,217.21	FIRST SUPPLY	TRAFFIC REPAIR KIT, FLAGS
033711	5/12/2015	625.87	FLEET ONE LLC	APRIL FUEL
033712	5/12/2015	2,810.00	FUSION METAL PRODUCTS INC	BLAST PAINT, STREET LIGHTS
033713	5/12/2015	240.00	GTI PARTS & SERVICES INC	OIL FILTER, OIL, GREASE TRUCK
033714	5/12/2015	3,916.80	HD SUPPLY WATERWORKS, LTD	IPERL METERS
033715	5/12/2015	26.00	INDUSTRIAL SAFETY, INC.	RECHARGE EXTINGUISHER
033716	5/12/2015	43,931.97	STUART C IRBY CO	TRANSFORMER, WIRE, SECTIONALIZER
033717	5/12/2015	150.38	J.H. LARSON COMPANY	PVC TERMINAL ADAPTER, LOCKNUT

033718	5/12/2015	502.06	KWIK TRIP	APRIL FUEL
033719	5/12/2015	80.00	LORY GRAMBERG	ANSWER PHONES 5/6/15
033720	5/12/2015	156.00	MY RECEPTIONIST, INC	ANS SVC MAY 05/06-06/02
033721	5/12/2015	442.50	NR TREE SERVICE LLC	STUMP GRINDER
033722	5/12/2015	1,300.00	QUALITY FLOW SYSTEMS, INC.	REPAIR-RECALIBRATE WELL
033723	5/12/2015	88.02	RIVERTOWN NEWSPAPER GROUP	NOTICE HYDRANT FLUSHING
033724	5/12/2015	238.66	VERIZON WIRELESS	CELL PHONE
033725	5/12/2015	77,652.57	WEST CENTRAL WIS BIOSOLIDS FAC	2ND QTR BIOSOLIDS
033726	5/12/2015	11,149.63	WESCO RECEIVABLES CORP	ABB-PIN, RACHET CUTTER, SOCKET
033727	5/13/2015	507.21	FREEDOM VALU CENTERS	APRIL FUEL
033728	5/13/2015	289.71	FRONTIER COMMUNICATIONS	APRIL PHONE BILL
033729	5/21/2015	13.98	ADVANCE AUTO PROFESSIONAL	MINI FUSE
033730	5/21/2015	151.13	ANDREW & ANGELA DYB	CR REF ACCT# 914400-21
033731	5/21/2015	1,016.37	BLUE WILLOW ENTERPRISES LLC	CR REF ACCT# 1407400-21
033732	5/21/2015	48.87	CHARISH AGUIRRE	CR REF ACCT# 1063700-23
033733	5/21/2015	760.00	COUNTRYSIDE PLUMBING & HEATING	BACKFLOW TEXT WELL# 6
033734	5/21/2015	200.00	FUSION METAL PRODUCTS INC	SANDBLAST & COAT FIRE HYDRANTS
033735	5/21/2015	2,798.00	GIRARD'S BUSINESS SOLUTIONS	SERVICE CONTRACT 7/15-6/16
033736	5/21/2015	167.45	HACH COMPANY	FLUORIDE RGT ACCUVAC
033737	5/21/2015	282.49	4IMPRINT, INC	PENCILS -WTR & WW SCHOOL PRESE
033738	5/21/2015	204.29	INDUSTRIAL SAFETY, INC.	TRIMLINE REFLECTIVE CONE
033739	5/21/2015	102.07	STUART C IRBY CO	ANCHOR
033740	5/21/2015	2,700.53	ITRON	MAINTENANCE AGREE 6/15-5/16
033741	5/21/2015	1,404.80	JOHN DEERE FINANCIAL	FEMALE PIPE, GENERATOR, OIL FILTER
033742	5/21/2015	204.79	KENNETH KROHN & G HALVERSON	CR REF ACCT# 1236500-22
033743	5/21/2015	51.79	KIMBERLY VANEPS	CR REF ACCT# 627700-22
033744	5/21/2015	290.00	KROLL'S EXCAVATING	BLACK DIRT
033745	5/21/2015	237.95	MACQUEEN EQUIPMENT INC	SWIVEL JOINT, COUPLERS
033746	5/21/2015	183.99	MAILFINANCE	LEASE STUFFER 3/9/15-6/8/15
033747	5/21/2015	98.99	MERIT TITLE CO	CR REF ACCT# 726300-22
033748	5/21/2015	30.19	MILTON & PATRICIA BRADISH	CR REF ACCT# 1020100-20
033749	5/21/2015	224.01	MICHELLE CORY	CR REF ACCT# 1092200-21
033750	5/21/2015	150.36	MIKE & CRYSTAL RICHTER	CR REF ACCT# 1806300-21
033751	5/21/2015	94.06	PUBLIC SERVICE COMM OF WI	APPLICATION TARIFF CHG-DPA'S
033752	5/21/2015	77.86	RICHARD SWORD	CR REF ACCT# 823300-23
033753	5/21/2015	58.70	RMF AUTO SERVICE, INC #2	OIL CHANGE
033754	5/21/2015	34.19	SCOTT ALM	CR REF ACCT# 1075900-21
033755	5/21/2015	9,495.30	SHORT ELLIOTT HENDRICKSON INC	MISC ENGINEERING SVC N TOWER
033756	5/21/2015	7.71	SIMON ELECTRIC CONST CO INC	LOCK NUT, PLASTIC BUSHING
033757	5/21/2015	5.00	ST CROIX COUNTY SHERIFF'S OFFICE	POLICE ACCIDENT REPORT
033758	5/21/2015	194.07	TOSHIBA BUSINESS SOLUTIONS	MAINT AGREEMENT & COLOR COPIES
033759	5/21/2015	57.38	WADE BREZINA	CR REF ACCT# 1358300-22
033760	5/21/2015	446.36	XCEL ENERGY	APRIL GAS BILL

Total \$ 1,203,292.70

CHECKS & WIRES

May 6, 2015

The regular meeting of the New Richmond Utility Commission was held on May 6, 2015 at 3:30 p.m. at the Civic Center.

Jerry Frey called the meeting to order at 3:30 p.m.

Members Present: Jerry Frey, Bob Mullen, Dan Casey, and Pat Becker.

Members Absent: Gerry Warner

A motion was made by Bob Mullen to approve the agenda, seconded by Dan Casey, and carried.

A motion was made by Pat Becker to approve the minutes of the April 6, 2015 meeting, approve bills, and disbursements, seconded by Dan Casey, and carried.

Public Comment – None

Approval of Shared Savings Loan – Loehr Management, LLC – The Shared Savings Program is a low interest loan program offered by WPPI Energy to customers of member utilities to assist in financing energy efficiency projects. Loehr Management, LLC is interested in pursuing a lighting upgrade in their facility at 155 West Third Street. The project would upgrade existing fluorescent lighting to LED technology. A motion was made by Bob Mullen to enter into the Shared Savings Agreement with Loehr Management, LLC for an amount not to exceed \$25,000.00, seconded by Pat Becker, and carried.

SEH Contract – 2015/2016 Street and Utility Improvements – Jeremiah Wendt gave an update on the contract structure and detail for the 2015/2016 Street and Utility improvements. It is being proposed the City of New Richmond enter into an agreement with SEH for design services on all of the projects. SEH would set up a total of four contracts for design and construction services related to Street and Utility projects in the 2015 and 2016 construction seasons. Three contracts will be with the City of New Richmond, and one will be with the Town of Richmond. A motion was made by Bob Mullen to approve the design contract with SEH in an amount not to exceed \$251,350.00, seconded by Pat Becker, and carried.

PSI Contract – 2015/2016 Street and Utility Improvements Subsurface Exploration – Jeremiah Wendt gave an update on the subsurface exploration needed for the Street and Utility Improvements. A series of soil borings need to be performed to determine the condition of the soils beneath the proposed projects. Staff, with the assistance of SEH, have received proposals from four firms for this subsurface exploration work. Based on review of the proposals, staff is recommending that the City contract with PSI to perform this work. A motion was made by Pat Becker to approve the contract with PSI for the Subsurface Exploration, not to exceed \$11,475.00, seconded by Bob Mullen, and carried.

South Water Tower Reconditioning Project Update – Jeremiah Wendt reported the reconditioning has begun on the South Water Tower. One issue remaining is the logo. There is an additional \$2,000.00 fee to substitute the New Richmond Tiger Logo for the New Richmond City Logo. Warren Wood is confident funding will be raised to cover the additional \$2,000.00. A motion was made by Dan Casey to approve the Tiger logo, contingent on New Richmond Utilities entering into a contract with Warren Wood, not to exceed \$2,000.00, for the funding of the Tiger Logo, seconded by Pat Becker, and carried.

Water Tower Space Lease with St. Croix County – Jeremiah Wendt reported that St. Croix County would like to add emergency communication facilities on the City's south water tower. These facilities would benefit the City of New Richmond's emergency communications. As a result, staff is recommending the facilities be placed on the tower rent-free. As part of this process, staff have worked with the City's attorney, St. Croix County, and their consultants to draft a lease agreement with St. Croix County for these facilities. A motion was made by Bob Mullen to approve the lease agreement between New Richmond Utilities and St. Croix County, seconded by Dan Casey, and carried.

Department Reports:

Bob Meyer, Water Superintendent, gave the following report:

The Water Department has been assisting Lakeside Foods with the repair of their discharge line. Three leaks were repaired at Mary Park. The flushing of hydrants is ongoing. The Water Department has completed their work at the campgrounds. HydroCorp will be doing more commercial and industrial inspections. The presentations by the Water Department at the local schools will take place during the month of May.

Steve Skinner, Lead Wastewater Treatment Plant Operator, gave the following report:

Spring cleaning of the tanks is complete. The ultra violet disinfectant system is now online and working. Steve Skinner gave a tour of the plant to the 20/20 Vision Group. Comments were made on the cleanliness of the Waste Water Treatment Plant. Work continues on the Gravel Bed Nursery. Some grade work is needed to complete the project. The Sewer Department is also doing presentations to the 4th graders during the month of May.

Tom Rickard, Electric Superintendent, gave the following report:

The LED street light upgrades, as well as ITRON conversions are ongoing. Electric disconnects have begun for the summer months. The electrical work for six additional campsites at the campground have been completed. As time allows, the electrical department continues to work on the West Alley rebuild. An electrical pole on East 3rd Street was hit and will need to be replaced. Phillips Plastic is in the process of a large expansion which will require a new transformer. April 18, 2015 was Lineman Appreciation Day.

Jeremiah Wendt, Director of Public Works, gave the following report:

Jeremiah Wendt is continuing to work with SEH on the Street and Utility projects. He is coordinating with Sprint to remove their facilities from the South Water Tower, so the reconditioning of the tower can continue. Verizon and T-Mobile are completed, except for a small amount of touch up painting. A \$6,500.00 grant was received from the Bosch Community Fund. This will be used for a Gravel Bed Nursery, which will be constructed at the Waste Water Treatment Plant. This nursery will be sufficient to grow approximately 50 trees per year. Steve Skinner and Jeremiah attended a Biosolids meeting. The last loan payment was made, which brings a need to look into long term planning.

Nancy Petersen, Finance Director, gave the following report:

2014 Financials – We received a draft version of the 2014 Utility financials on May 4. Nancy Petersen is in the process of reviewing them before they are issued. Nancy is currently working on a financial analysis and review of each utility, which will be presented at a future meeting. This will include cash flow analyses and the new CIP debt projections. The 2006 Electric Revenue Bond has a call date of October 1, 2015. Options to consider refinancing, contributing excess electric utility funds or waiting to refinance until the Electric Utility needs to borrow for new projects will be presented at the June 3 Utility Commission meeting. Sean Lentz from Ehlers & Associates has been invited to attend this meeting.

Utility Office – When time has allowed, we have been working on the New Richmond Utility Billing Procedures Manual and again the goal is to have this complete by the end of 2015. With Spring here, there has been a significant uptick in customers moving in and out and we are continuing to process all of the paperwork for the ITRON meter conversion project.

Act 274 – Tariff Changes to Deferred Payment Agreements (DPA's) – On April 14 an application was filed with the Public Service Commission to change the Electric and Water Operating Rules Schedule X-1 related to changes to deferred payment agreements. The applications were accepted by the PSC on April 15, 2015. We have not received any communications since April 15.

MEUW District 1 and 2 Customer Service Roundtable Meeting – Diane and I attended MEUW's Customer Service Roundtable meeting on May 5 in Cornell, WI. Updates were provided on Act 274, current legislative issues including the proposal of closing the Local Government Property Insurance Fund which we have insurance through, the billing procedures manual, general discussions related to disconnections and processes, the upcoming MEUW Annual Conference, Fall Accounting, and Customer Service Seminar.

Weston Arndt, WPPI Energy Services Rep, gave the following report:

Phillips Medisize was given an incentive through the WPPI Energy RFP for Energy Efficiency application. The award funding of \$81,467.00 is for measures to include Central Resin Drying and Processing, LED Lighting, and High Efficiency chiller. Presentations are continuing on school education and outreach through the month of May. Wes met with Westfields Hospital to discuss the online display for the solar array on campus, as well as potential incentives for lighting and HVAC with their facility remodel. Wes also met with Domain to discuss energy efficiency opportunities, specifically lighting, and compressed air. Efficiency projects are underway at St. Croix Press. This includes exhaust heat and compressed air heat recovery. A \$1,000.00 scholarship will be awarded to a NRHS senior at the awards ceremony on May 22, 2015.

Mike Darrow, Utility Manager, gave the following report:

Marketing of the Solar Garden is going to begin. A billing insert will be done in June, outlining the benefits of the Solar Garden. Mike extended a thank you to the employees of the City of New Richmond, and New Richmond Utilities, for their efforts in preparing for the Loyalty Day Parade. The Finance Committee has given approval for the use of purchasing cards. Each department will be issued a purchasing card to purchase equipment, and for day to day expenses. Review of the employee handbook is ongoing. The largest issue continues to be the unfunded liability and sick time. The first draft of the salary study for employees of the City of New Richmond and New Richmond Utility has been completed. Staff is looking into the cost savings of a merger between the City of New Richmond and New Richmond Utility.

Communications and miscellaneous correspondence – None

There being no further business, a motion was made by Bob Mullen to adjourn, seconded by Dan Casey, and carried. The meeting adjourned at 4:40 p.m.

Jerry Frey, President

Bob Mullen, Secretary



TO: Utility Commission
FROM: Nancy Petersen, Utility Finance Director
DATE: May 28, 2015
RE: **2006 Electric Revenue Bond**

BACKGROUND

The call date for the \$2,160,000 Electric Utility Revenue Bonds, Series 2006B is October 1, 2015. Sean Lentz, Ehlers and Associates, will be in attendance and present several options for your consideration:

1. Proceed with refinancing of the 2006 Electric Bonds on a stand-alone basis (current refunding)
2. Plan on contributing any excess Electric Utility funds to make annual prepayments on the existing debt (strategy would be to attempt to pay off the issue with annual contributions – maintain the existing prepayment flexibility)
3. Wait to proceed with any refinancing until the Electric Utility needs to borrow for new money projects

RECOMMENDATION

Staff recommends proceeding with Option 1, refinancing the 2006 electric bond on a stand-alone basis. This option will provide the most benefit to the Electric Utility. At this time we do not have any new electric borrowings planned. In the alternative, if refunding the existing debt is not the option chosen by the Utility Commission, then making excess annual prepayments is advisable.

Exhibit 1

For Discussion Only

City of New Richmond, WI



Preliminary Refunding Savings Analysis

	PRIOR TO THE REFUNDING					FOLLOWING THE REFUNDING					DEBT SERVICE SAVINGS
	Existing Debt Service (to be refunded)					New Debt Service					
	\$2,160,000 Electric Utility Revenue Bonds, Series 2006B Dated: 5/9/2006					\$1,800,000 Electric Utility Revenue Refunding Bonds, Series 2015A Dated: 8/1/2015					
Year	Principal 4/1	Rate	Interest 4/1 & 10/1	Less: Fund Transfers	Net Debt Service	Principal 4/1	Rate	Interest 4/1 & 10/1	Less: Fund Transfers	Net Debt Service	
2015					-					-	
2016	125,000	4.20%	75,100		200,100	140,000	1.00%	43,511		183,511	
2017	130,000	4.20%	69,850		199,850	150,000	1.25%	35,895		185,895	
2018	135,000	4.20%	64,390		199,390	150,000	1.45%	34,020		184,020	
2019	145,000	4.20%	58,720		203,720	160,000	1.65%	31,845		191,845	
2020	150,000	4.20%	52,630		202,630	160,000	1.85%	29,205		189,205	
2021	160,000	4.25%	46,330		206,330	165,000	2.00%	26,245		191,245	
2022	165,000	4.25%	39,530		204,530	170,000	2.25%	22,945		192,945	
2023	175,000	4.25%	32,518		207,518	175,000	2.45%	19,120		194,120	
2024	180,000	4.40%	25,080		205,080	175,000	2.65%	14,833		189,833	
2025	190,000	4.40%	17,160		207,160	185,000	2.80%	10,195		195,195	
2026	200,000	4.40%	8,800	(208,800)	-	170,000	2.95%	5,015	(180,000)	(4,985)	
Total	1,755,000		490,108	(208,800)	2,036,308	1,800,000		272,828	(180,000)	1,892,828	
										143,479	

Notes:

1. Rates based on current market rates for A3 rated utility bonds

Plus Rounding: 2,200

Total Cash Flow (Future Value) Savings:	145,679
Present Value Savings of 7.359%:	129,147

Sources	Uses	Rate Summary
Par Amount of Bonds:	Underwriters Discount:	True Interest Cost:
Transfer from Prior Issue DSR:	Costs of Issuance:	All-Inclusive Cost:
	Deposit to Debt Service Reserve Fund:	
	Deposit to Current Refunding Fund:	
	Rounding Amount:	
Total:	2,008,800	2,008,800



TO: Utility Commission

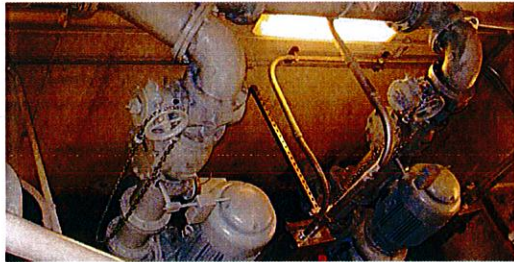
FROM: Jeremiah Wendt, Director of Public Works

DATE: May 28, 2015

Re: Wastewater Facility Planning Proposals

New Richmond Utilities has received the attached proposals from SEH and MSA for wastewater facility planning. Both firms will be in attendance at the Utility Commission meeting to provide a brief presentation and answer any questions that staff and the Commission may have.

PROPOSAL FOR
ENGINEERING SERVICES



Wastewater Facility Plan Update

CITY OF NEW RICHMOND

Wednesday, May 27, 2015



Building a Better World
for All of Us®

Engineers | Architects | Planners | Scientists

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Building a Better World
for All of Us®

May 27, 2015

RE: New Richmond Utilities
Wastewater Treatment Facility Plan
Update
SEH No. NEWRI P132328 14.00

Jeremiah Wendt
Director of Public Works
City of New Richmond
156 East First Street
New Richmond, WI 54017

Dear Mr. Wendt:

Thank you for the opportunity to submit this proposal for professional services to the City of New Richmond Utilities for wastewater treatment facility planning. This letter serves as our understanding of the project scope, schedule, and fee.

PROJECT UNDERSTANDING

In 1996 and again in 2005, SEH prepared wastewater facility plans for the City of New Richmond Wastewater Treatment Facility (WWTF). The 2005 Facility Plan provided a phased-project approach identifying capital projects as the City's population grows. Since that time, some of the recommendations from the 2005 Facility Plan have been implemented, including Main Lift Station screening, UV disinfection, and primary clarifier rehabilitation. However, the growth projections from 2005 and the associated recommended project phasing need to be updated to reflect current populations and anticipated growth with the construction of a new St. Croix River Bridge. Additionally, the City's current discharge permit is expired; and a new permit is expected this summer to include new effluent discharge concentrations.

The Facility Plan update will provide updated phasing schedule recommendations, updated project costs, and will address the current condition and capacity at the WWTF, incorporating those projects completed at the WWTF since 2005. The Facility Plan will also address new effluent limits. SEH will work with the City to evaluate and prioritize WWTF improvements to meet the City's financial and growth needs.

Driving this Facility Plan update is the St. Croix Bridge Coalition, which has obtained funding for facility plans for the communities impacted by this new bridge. The Coalition is interested in understanding the impact of this new bridge on the region's environment. The timing of this Facility Plan update also corresponds with new effluent limits and a new discharge permit for the WWTF.

PROJECT APPROACH

The New Richmond WWTF is well-maintained and operated. The Utility does a good job of replacing equipment when it is necessary and maintaining the equipment in good operations. As a result, the facility

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 3535 Vadnais Center Drive, St. Paul, MN 55110-5196

SEH is 100% employee-owned | sehinc.com | 651.490.2000 | 800.325.2055 | 888.908.8166 fax

is in great shape compared with other facilities we see. Given this and the effort that has been put forth on previous facility plans, SEH proposes a streamlined, efficient process for this Facility Plan update. Projected future flows and loads over the 20-year planning period will form the basis of a new phasing schedule, with updated phase costs. SEH will update the electronic files created for the previous Facility Plan, providing for efficiencies in the projection calculations.

A small effort has been assumed for alternative analysis, as the phasing strategy proposed in the 2005 Facility Plan considered the significant alternatives, some of which have been implemented today. The areas where SEH proposes to allocate more hours are for alternatives to improve the biological phosphorus removal process and expand the activated sludge system.

SEH offers flexibility with the scope and schedule. We will adjust the schedule to fit the City's best interests. We also have flexibility to add to or remove from the scope as deemed necessary, depending on further input from City staff or requirements of the pending NPDES permit. SEH brings a wealth of knowledge of the existing WWTF system and the community as a whole. As a multi-disciplinary firm, we also have a pool of resources who can be brought in as needed throughout the project or into the future, whether related to operational questions, structural questions, electrical needs, or coatings assistance.

SCOPE OF WORK

Task 1: Existing Conditions and Design Criteria

The first step in the facility-planning process is to document the existing conditions and compare the existing unit processes against typical design criteria and other design standards. The Facility Plan will address existing conditions and design criteria for the treatment plant, as well as the 15 lift stations. The following will be included in the Facility Plan to document the existing conditions:

- Review the discharge monitoring reports (DMRs) from the previous three years and provide current wastewater characteristics, including flow and TSS, biochemical oxygen demand (BOD), and phosphorus. Historic loads will be compared to expected loads based on typical per capita waste contributions.
- Existing treatment system description: The description will be based on the descriptions from previous facility plans, the as-built drawings for recently modified components and lift stations, and other information provided by the Utility.
- Unit process capacity summary: The summary will include design capacity information, where available, and treatment capacity as evaluated according to design criteria.
- Unit process condition summary: The summary of the unit processes will also include a description of the condition of the unit processes, where specific condition observations are made.

Task 2: Identify Future Design Conditions

To create a useful planning document, SEH will identify future design conditions, including future wastewater flows and loads resulting from both residential and non-residential customers and future effluent limits. The following will be included in the discussion of future conditions:

- Planning area and population projections: The City's population projections will be based on projections for the County and Corridor area applied to the City.
- Future flows and loads calculations.
- Effluent limits, which will be determined by the Wisconsin Department of Natural Resources (DNR) as part of the NPDES permit renewal process.

Task 3: Alternative Analysis

- The alternative evaluation will build upon what was previously evaluated in the 2005 Facility Plan. The 2005 Facility Plan looked at the following alternatives:
- Flow equalization versus no equalization: No equalization was recommended.
- Biological versus chemical phosphorus removal: Biological was recommended.
- Continued chlorination/dechlorination versus UV disinfection: UV disinfection was recommended and has since been installed.
- Continued gravity sludge thickening versus dissolved air floatation thickening: Both options were equally cost-effective.

For this Facility Plan update, SEH proposes to evaluate only one process – the activated sludge system. The existing biological phosphorus removal system is not functioning and phosphorus removal is achieved with chemical addition. With anticipated lower effluent phosphorus limits in the reissued permit, biological phosphorus removal becomes more important. SEH will complete a high-level evaluation of the biological treatment system and will suggest changes to improve biological phosphorus removal. Also, with advancements in treatment technologies in the past decade, SEH will look at alternatives to expand the existing activated sludge system capacity.

Task 4: Cost Analysis and Recommendations

SEH will prepare engineer's estimates of the costs associated with the alternatives. The present worth cost analysis for each stage of improvement will be determined incorporating capital costs and O&M costs.

SEH will estimate the impact that recommended improvements will have to the City's sewer rates. This will simply show the relative rate increases due to the future improvement schedule and will not be a detailed rate study.

Task 5: Sewer Ordinance Review and Public Outreach Documents

SEH will review the City's existing sewer ordinance and provide recommendations for improvements to strengthen the City's ability to regulate discharges to the collection system, including those from industries. SEH will also provide example public outreach materials, used by other communities, to educate the public on phosphorus.

Task 6: Deliverables

Tasks 1 through 5 will be documented in the Facility Plan. The Facility Plan will include conceptual process flow diagrams and site layouts as needed. Two hard copies of the draft Facility Plan will be submitted to the Commission for comments. Comments will be incorporated into the final Facility Plan for Commission approval.

Task 7: Meetings

Several meetings with the City are anticipated throughout the course of completing the Facility Plan. These meetings consist of:

1. A phone conference initial kick-off meeting,
2. A meeting to discuss a Draft Facility Plan,
3. Presentation of the final Facility Plan to the Commission and Council,
4. Presentation of the final Facility Plan to the Coalition, and
5. Public hearing.

Task 8: Project Management

Project management and coordination are needed to successfully complete the Facility Plan. The project manager will be the point of contact between the City and SEH staff. The project manager will also assure that deliverables are completed as required with proper review.

ASSUMPTIONS AND ADDITIONAL SERVICES

Additional Services not included in the scope of services:

1. Conducting a site survey or performing property surveys.
2. Conducting soil borings or soil evaluations.
3. Projecting planning area or population projections, beyond applying County or corridor projections by others to the City.
4. Assistance with negotiating NPDES limits.
5. Completion of a non-degradation review or environmental impact statement.
6. Fees for regulatory permits.
7. Meetings in addition to those identified above.
8. Field inspections of each lift station.
9. Structural, electrical, and mechanical inspections for condition assessment.
10. The scope of work above assumes the new discharge permit contains a phosphorus limit of approximately 0.5-0.6 mg/L. Additional services would be applicable if this phosphorus limit is more stringent, requiring comparison of technologies to meet ultra-low level phosphorus limits.

UTILITY RESPONSIBILITY

The Utility shall:

1. Assist SEH by placing at SEH's disposal all available information pertinent to the Project, including the following:
 - DMRs from last 3 years,
 - CMARs from the last 3 years,
 - Peak hourly and peak instantaneous flow data,
 - Equipment shop drawings (as requested),
 - Service area map, and
 - Lift Station information, including drawings, equipment information, and condition report.
2. Provide additional sampling and testing as may be required to better understand the biological phosphorus removal parameters.
3. Give thorough consideration to all sketches, estimates, drawings, specifications, proposals and other documents presented by SEH, and inform SEH of all decisions within a reasonable amount of time so as not to delay SEH.
4. Participate in meetings on a regular basis as proposed in this Agreement.
5. Provide such fiscal, legal, accounting and insurance counseling services as may be required for the Project.
6. Pay all charges or fees required by any agency or authority having jurisdiction over the Project for review of plans, specifications and contract documents or for obtaining permits.

PROJECT TEAM

Our team organization draws upon the strengths of our personnel and includes team members who have wastewater facility planning experience. We also bring an operations-based approach to the evaluation of your existing facility's performance and long-term considerations for operation and maintenance flexibility and life-cycle costs. Our firm's experience with your WWTF and local knowledge will result in an efficient

planning process to develop a Facility Plan, which will continue to guide the City in planning for future wastewater treatment needs.



Susan Danzl will serve as Project Manager and Process Engineer. In this capacity, she will be the focal point for communication and delivery of the agreed upon scope of services within the contracted budget and schedule. Susan has over 9 years of experience in wastewater treatment facility planning, design, and construction administration. Susan has recently completed facility plans or capital planning reports for the cities of Mazeppa, Cambridge, Melrose, and Detroit Lakes.



Al Bush will support Susan as the Technical Advisor and Quality Control Engineer for the facility plan update. In this role, Al will review deliverables prior to submittal to the City and provide an independent perspective on the technical aspects of the project. Al is a project manager and senior design engineer with 35 years of experience managing and coordinating public works projects.



Gary Hanson will serve as the Wastewater Operations Specialist. Gary has 39 years of experience operating, managing, commissioning, training operators, and starting up water and wastewater treatment plants. For the past 25 years as a senior operations specialist, his responsibilities have included the coordination of commissioning and start-up efforts of wastewater and water treatment plants.



Dave Simons will serve as the Client Service Manager/Principal-in-charge. Dave has an existing relationship with the City and Utility through his role as Office Manager of the SEH New Richmond office, and Client Service Manager for the City of New Richmond.

SEH has partnered with the City on many previous projects at the WWTF, including the following:

- 2012 Aeration System Upgrade
- 2011 Clarifier Rehabilitation
- 2009 UV Disinfection
- 2007 Main Lift Station Improvements
- 2005 Facility Plan
- 2001 Influent Pump Replacement
- 1996 Facility Plan

We will draw upon this history to provide an updated Facility Plan, to guide the City over the next 20 years.

While SEH is proposing a streamlined approach to updating the existing facility plan, SEH brings strengths the City could choose to call upon depending upon operational needs and permit requirements. These additional capabilities, identified below, make SEH a good teaming partner to continue to improve operations at the WWTF.

- **Process modeling.** SEH has an experienced process modeler, Dan Schaefer, in our Sheboygan, Wisconsin office. Process modeling can help optimize treatment performance, especially with respect to biological treatment of nutrients phosphorus and ammonia.
- **Low-level Phosphorus Planning Experience.** SEH has experience helping a number of other communities plan for stringent phosphorus limits of less than 0.1 mg/L. While not anticipated at this

time for New Richmond, should the DNR require this level of phosphorus removal, SEH has capabilities to assist. We recently completed a facility plan for the City of Detroit Lakes, MN which is required to meet a limit of 0.068 mg/L. We are also assisting the City of Virginia to meet an effluent limit of 0.07 mg/L. In addition to this, SEH has worked with a number of communities in Wisconsin to complete Phosphorus Operational Evaluation Reports (OERs) to meet requirements of Water-Quality Based Effluent Limits (WQBELs) including Town of Yorkville, Fort McCoy, and Delafield-Hartland.

- **Process Optimization.** With Gary Hanson and other licensed wastewater operators on staff, SEH can assist the WWTF operations staff continue to improve operations and reduce treatment costs.

SCHEDULE

SEH has flexibility in schedule and workload to accommodate the finalization of the WWTF's new NPDES permit. Assuming the permit is finalized this summer, SEH proposes the following schedule which can be accelerated or extended to provide the best service and product for the City.

Task	July			August			September			October			November		
Review Operational Data and DMRs															
Existing Facility Evaluation															
Population and Flow Projections															
Improvements and Phasing Strategy															
Cost Evaluation															
Draft Facility Plan															
Final Facility Plan															
Meetings			1						2		3		4	5	

AUTHORIZATION AND COST

SEH is prepared to complete this scope of work and begin these efforts upon receipt of your written authorization. Based on the scope of services described above, SEH proposes to complete the work for a fee of \$15,930 as broken out in the following table.

Task	Hours	Labor and Expenses
Task 1: Existing Conditions and Design Criteria	37	\$3,210
Task 2: Identify Future Design Conditions	3	\$280
Task 3: Alternative Analysis	16	\$2,100
Task 4: Cost Analysis and Recommendations	22	\$1,920
Task 5: Sewer Ordinance Review and Public Outreach	6	\$650
Task 6: Deliverables	35	\$4,060
Task 7: Meetings	17	\$2,780
Task 8: Project management	8	\$930
TOTAL	144	\$15,930

SEH is willing to be flexible with the scope/fee to best benefit the City. The following are a couple of ideas to optimize the scope/fee:

- Given the background of the City's Director of Public Works, SEH's attendance at the Coalition Meeting and the public hearing may not be necessary. As an alternative for the City's consideration, SEH could prepare presentation materials and present at the Council/Commission meeting, but not attend the Coalition meeting or public hearing to reduce the fee by \$1,000.

Mr. Jeremiah Wendt
May 27, 2015
Page 7

- A cursory evaluation of the 15 lift stations was requested; however, it is uncertain what information will be provided and how much evaluation is required. SEH has assumed an effort of \$1,900 for this task, which could be refined if more detail is available. Or as an alternative for the City's consideration, we can delete this task for a cost savings of \$1,920.

SUMMARY

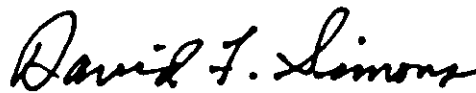
We appreciate your consideration and look forward to continuing our working relationship with New Richmond Utilities and the City of New Richmond. If selected, SEH will follow-up with a Supplemental Letter Agreement for signature. If you have any questions regarding this proposal, please contact Susan Danzl at 651.490.2064.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Susan Danzl
Project Manager



Dave Simons
Client Service Manager

SRD/dmk

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May 28, 2015

Jeremiah Wendt
Public Works Director
New Richmond Utilities
156 E. First Street
New Richmond, WI 54017

Re: Proposal for Wastewater Facility Planning
New Richmond, Wisconsin
MSA Project No. 07985013

Dear Mr. Wendt:

Bill and I would like to thank you and Steve for taking the time to meet with us regarding the New Richmond Wastewater Treatment Facility. Through our work with the Highway 64 Stormwater and Wastewater Coalition we have had the opportunity to meet and collect data related to your wastewater treatment facility. Our May 18, 2015 meeting helped solidify our understanding of the Utility Commission's goals and objectives.

The new St. Croix River Crossing offers the City of New Richmond the opportunity to capture Memorandum of Understanding (MOU) grant dollars for wastewater planning efforts. These dollars are meant to be spent by the completion of the bridge project. Now is the time to develop future plans for your assets related to the wastewater collection and treatment system.

The current facility is well designed, operating efficiently, and meeting the needs of your constituents. MOU funds affords the City a unique opportunity to cast a wider net to investigate other aspects of the system and dig deeper into areas such as innovative chemical/biological phosphorus removal and grit removal at the lift station. Having a Public Works Director and wastewater treatment operator so familiar and experienced with the facilities enables us to focus our efforts to those tasks most meaningful to the City.

Our objective is to provide New Richmond with all information necessary for you to proactively plan and fund future improvements. Strong communication throughout the project will help assure success. This letter proposal reflects this understanding of the work, details our approach, and itemizes what could be accomplished through this collaborative effort.



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PROJECT TEAM

MSA has assembled a team of experienced wastewater and municipal engineers for the project. Our team brings a wide range of ideas to create better solutions. We are ready to help make certain budgetary and timeline requirements are met. All work will be performed by MSA staff. No outside consultants, associates, or contractors are proposed. A summary of each team member, including their role and related project experience, is included below.

WASTEWATER ENGINEER: Bill Chang, PE has more than 25 years of water/wastewater engineering experience and will serve as the wastewater engineer on this project. A former WWTF operator, Bill specializes in managing wastewater projects, from planning and design through construction management and start-up. He has managed the project lifecycle for more than 20 wastewater treatment facilities with capacities ranging from 0.3 MGD to 96 MGD. Bill applies various innovative wastewater treatment technologies to help communities accomplish their goals in a cost-effective manner.

WASTEWATER OPERATIONS MANAGER: Tom Fitzwilliams is a certified wastewater operator who brings more than 17 years of wastewater plant operation experience to the team. His main role on this project will be to ensure the Facility Plan provides practical solutions that meet the expectations of your plant operations staff. As the leader of MSA's wastewater operations group, Tom focuses on wastewater treatment and wastewater contract operations. He is an expert in chemical and biological phosphorus removal process optimization and troubleshooting. His knowledge of Wisconsin's water quality based effluent phosphorus limits will open the door to practical and less costly phosphorus compliance options for the City. An example of Tom's expertise in chemical optimization for phosphorus reduction is demonstrated by the tremendous chemical cost savings that was realized for the Village of Holmen. A project fact sheet for his achievement is attached under the Project Experience at the end of this proposal.

CLIENT LIAISON: Chuck Schwartz, PE has more than 20 years of municipal engineering experience and will serve as the client liaison on this project. He will be responsible for coordinating MSA's resources and keeping our commitments to the City. He will also provide municipal engineering support and project management. Chuck's management activities will include progress memos and updates to Highway 64 Coalition from the onset of the project to final completion.

PROJECT ENGINEERS: Our team includes Erik Evenson, PE and Mark Lundgren. Erik and Mark will play a critical role by assisting with the planning and drafting the project. They have 14 years and 6 years of engineering experience, respectively. Both of them have a background in wastewater engineering. Erik is currently assisting with the Village of Deer Park Facility Plan. Mark is assisting Bill with the design and construction of wastewater treatment facilities in the cities of River Falls and Cumberland.



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MSA has capacity to meet the scheduling commitments identified herein. We are confident in our understanding of the technical requirements of the project, and look forward to building a stronger relationship with the City of New Richmond.

UNDERSTANDING OF THE PROJECT

The City of New Richmond is seeking professional services to update previous wastewater treatment facility plans and amendments. Past planning work provides a solid foundation for the next generation of plans. Applicable planned improvements will still be constructed, but will occur under a new phasing approach to match revised flow projections and any instituted treatment operation efficiencies.

Wastewater treatment facility equipment is in good shape. Staff has kept up with routine maintenance. The Utility Commission has proactively addressed plant needs enabling the facility to continually meet permit requirements. Through a course of strategic capital improvements they have managed to avoid major investments that would raise user rates dramatically. Recent improvements have led to a significant reduction in energy costs. This year, staff is exploring ways to further innovate at the plant by reducing chemical usage and cost.

The current facility operates at about 65% capacity and is capable of handling close to 1 mgd. Influent is comprised almost exclusively of normal domestic waste with very little high strength waste contributors or wet industries. There are a few hydraulic bottlenecks in the collection system, such as the 15" sewer on 3rd Street. As part of this project the sanitary sewer collection system and regional lift stations should be reviewed, but the central focus of the facility plan is the City's main lift station and treatment facility.

Phosphorus compliance is on the minds of many sewer utilities in Wisconsin. The City's WPDES permit expired in September 2013. It is expected that the new permit will contain a lower effluent phosphorus limit, possibly down to 0.5 mg/L. The facility is capable of achieving a significant degree of phosphorus removal down to 0.4 – 0.7 mg/L using chemical treatment methods. Based on recent plant performance, it appears the facility may be able to meet the future phosphorus limits through conventional biological and chemical process. This would avoid the need for the City to consider more cumbersome compliance methods such as Adaptive Management or Water Quality Trading. Reissuance of the new permit is on hold until the Willow River Total Maximum Daily Load study is complete. The Facility Plan Amendment will consider all phosphorus compliance alternatives and set the stage for the City to meet future phosphorus limits in the most cost effective way.

The City wants to take a comprehensive look at treatment facility operation and components. The consultant working on this project will need to work cooperatively with Jeremiah and Steve as they explore ways to reduce long term chemical usage. Other important plan items include:

- **Grit removal at the City's main lift station.** Since the installation of vertical Huber fine screen at this location, grit has become more of a maintenance item for the City. The plan should review options

to improve current grit removal operations in front of the Huber Screen at the Main Lift Station, or keep grit in suspension for ultimate removal at the treatment facility.

- **Phosphorus removal technology evaluation.** The proposed phosphorus limit appears to be attainable though conventional phosphorus treatment methods. The plant currently uses a chemical removal process. However, this comes with a significant annual cost. The Facility Plan Amendment will evaluate the cost effectiveness of chemical phosphorus system optimization versus the implementation of biological phosphorus removal.
- **Adaptive Management and Water Quality Treatment Review.** Initial evaluation suggests that these watershed-based approaches to phosphorus compliance may not be necessary. However, a cursory review of these alternatives would be completed in the Facility Plan Amendment.
- Evaluate the existing biosolids handling operation including the potential cost savings from side stream phosphorus treatment.
- Analyze treatment plant operations and seek innovative solutions to reduce operational and energy costs, improve treatment efficiencies, and plant flexibility.
- Assess facility's ability to accept septage and potentially improve operations related to this item. Most communities find the fees collected are not commensurate with the efforts and headaches associated with septage acceptance. The City currently accepts septage on a limited basis. The Highway 64 Coalition has placed the review of each municipal wastewater treatment facility to accept septage as a funding priority.
- Review wastewater-related City ordinances and explore public education opportunities. It is recommended that the ordinance be reviewed and updated to best prepare the City for an industry that would generate heavy flows and/or loads into the collection and treatment system.

SCOPE OF WORK

MSA proposes to complete a Facility Plan Amendment for the City of New Richmond. The Plan will be compliant with Chapter NR 110, and will include the following elements:

1. Review Historical Data

- Meeting No. 1- Project kickoff.
MSA will gather plant operation data, record plans, operation and maintenance manuals, current permits, and engineering reports.
- Update historic plant data through August 2015.
- Update historical WWTF loadings and performance.

2. Inflow and Infiltration (I/I) Analysis

- Review influent and effluent flow data from past three years.
- Review water use data from PSC reports.
- Conduct I/I evaluation and summarize results.



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3. Establish Design Conditions

- Update population projections through 2035.
- Using historic plant data, establish future wastewater flows and loadings for the 20 year design conditions.
- Submit Effluent Limits Request to WDNR.
- Review future effluent permit limits, including Willow River TMDL.

4. Evaluate Condition and Capacity of Existing Facilities

- On-site inspection of WWTF. Following the information review, Tom Fitzwilliams and Bill Chang will meet with the operators at the wastewater treatment plant and conduct a plant-wide process review. MSA will discuss the sludge production, energy usage, chemical usage, manpower utilization and operational efficiency with Jeremiah and Steve.
- Architectural review of building exterior, including roof and masonry system, windows and doors.
- Update condition and capacity of existing unit processes.
- Summarize condition and capacity of plant in final report.
- Meeting No.2 – Status update on flows and loadings and facility evaluations. After the initial plant review, MSA will schedule a time to meet with Jeremiah and Steve. At this meeting, MSA will summarize our plant review, and assist the City in developing project goals and objectives.

5. Evaluation of Treatment Facility Needs

- Evaluate treatment process improvements, including:
 - Grit removal improvements. MSA understands that the City operator's preference is to improve grit removal efficiency at the Main Pump Station rather than passing grits through the pump station and the wastewater plant. MSA will develop multiple grit removal options at the Main Pump Station. Probable construction, operation and maintenance costs will be prepared for the City's consideration. Due to the high groundwater table at the Main Pump Station, any underground structure construction will be expensive. Using the space inside the existing wet well and/or adding an above ground space for grit removal would be less expensive than adding an underground structure. For cost comparison purposes, MSA will also provide alternatives of re-suspending grits at the Main Pump Station and final grit removal at the wastewater plant headwork.
 - Chemical phosphorus removal and biological phosphorus removal. Based on our initial meeting with Jeremiah and Steve, MSA has identified four (4) potential areas for evaluation.
 1. The existing chemical feed system could be improved with the addition of on-line orthophosphate monitoring to flow pace the chemical feed rate based on a

target effluent phosphorus concentration. An improved chemical feed system could reduce the amount of chemical used, and ensure compliance with the future effluent phosphorus limit.

2. The existing sludge selectors in front of aeration tanks could potentially be re-configured to enable biological phosphorus removal and further reduce the chemical consumption. MSA has developed a Phosphorus Optimization Protocol (POP) which involves extensive initial process monitoring and controls to optimize biological phosphorus removal. This tool has successfully helped our clients reduce or eliminate chemicals. At your request, the task of using the POP is not included in this proposal. However, MSA will make sure the biological phosphorus removal evaluation in this study will take into account of subsequent application of the POP for process optimization.
 3. The third area is the centrate the plant receives from the Western Central Wisconsin Regional Biosolids Facility. In our past experience, there may be residual phosphorus reducing chemical in the centrate. By accepting additional centrate may generate additional revenue for the City and reduce the chemical costs. If the City would like to further investigate this option, MSA will use BioWin to model the capacity of the existing activated sludge system and the plant's ability to handle additional organic load from the centrate. BioWin modeling is not included in this proposal. If needed, MSA will perform the BioWin modeling as an additional service to the City for \$12,000. Once the baseline model is established, MSA can run additional simulations related to this Facility Plan update for the City without additional costs.
 4. The fourth area is the plant recycle water or commonly referred to as side streams, such as sludge thickener supernatant and sludge storage supernatant. In some cases, side streams could contribute highly concentrated phosphorus loadings to the activated sludge system, particularly from a biological phosphorus removal plant. As a part of the biological phosphorus removal evaluation, side stream treatment will be evaluated as well. Based on the timing on the new phosphorus limits, MSA will assist the City of New Richmond in developing a strategic schedule for implementing the needed improvements in phases.
- Evaluation of watershed-based compliance options (Adaptive Management and Water Quality Trading). At this time, it appears that the probable new phosphorus limits from WDNR could be achieved by the City without using any watershed-based compliance options. To complete a thorough study, these options will still be discussed and evaluated. It provides the City with a complete picture of all the options available and the awareness of watershed management.

- Other improvement needs. MSA will review each component at the wastewater treatment plant and the collection system and develop a 20 year capital improvement plan (CIP) for the City of New Richmond. MSA will discuss the priority of each improvement project, including the recommended upgrades from the original Facility Plan, with the City staff.

6. Recommendations and Implementation

- Summarize recommendations for improvements to treatment process.
- Prepare cost estimates for recommended improvements.
- Complete funding/financing analysis. Review City's sewer utility budget and equipment replacement fund balance. Identify project financing option.
- Estimate sewer rates resulting from recommended improvements.
- Review recommendations and costs with Utility Commission (Meeting No.4).
- Prepare and submit WDNR Clean Water Fund Priority Ranking and Evaluation Form (PERF) and Notice of Intent to Apply (ITA) documents by October 31, 2015, if the City decides to apply for funding from the State.

7. Final Reporting and Administration

- Meeting No. 3 - Review meeting with Owner and WDNR.
- Project administration, correspondence and internal team meetings.
- Meeting No. 4 - Present summary of the Report to the Utility Commission.
- Meeting No. 5 - Coordinate and attend Public Hearing to present final Facility Plan Amendment.
- Deliverable will include ten (10) bound copies each of the Report to the Utility Commission and WDNR.
- Provide electronic copy of Report as .PDF to the Utility Commission and WDNR.



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SCHEDULE

We anticipate the project proceeding in accordance with the below schedule. We have the ability to adjust the schedule per City's requirements and are willing to proceed ahead of funding approvals or new permit issuance.

ANTICIPATED PROJECT SCHEDULE	COMPLETION DATE
Utility Commission Interviews	June 3, 2015
Council Approves Engineering Firm Selection	June 8, 2015
Funding Application Presented to Highway 64 Coalition	June 2015
St. Croix County and DNR Approval	July/August 2015
New NPDES Permit Issued	July/August 2015
Meeting No. 1 - Project Kick-off and Site Visits	August 2015
Meeting No. 2 - Status Update	November 2015
Meeting No. 3 - WDNR Review	December 2015
Meeting No. 4 - Utility Commission Presentation	January 2016
Meeting No. 5 - Public Hearing	February 2016
Council Accepts Facility Plan	March 2016
Final Plan Submittal to WDNR	April 2016

CONSULTANT FEE

A detailed cost breakdown is attached to this letter proposal. For each scope item the personnel responsible is identified along with their estimated hours, rates, and reimbursable. Below is the fee summary.

TASK	COST
Project Management	\$3,000
Review Historical Data	\$1,000
Inflow and Infiltration Analysis	\$2,000
Establish Design Conditions	\$1,000
Evaluate Condition and Capacity of Existing Facilities	\$2,000
Evaluation of Treatment Facility Needs	\$7,000
Recommendations and Implementation	\$3,000
Final Reporting and Administration	\$5,500
Total:	\$24,500



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WHY MSA?

With the extensive wastewater facility design and hands-on treatment plant operation experience, our selected team will provide innovative and practical solutions to address your wastewater challenges. Our goal is to develop a long-term working relationship with the City's Public Work Director and the operation staff.

MSA is the foremost expert on the new phosphorus regulations in Wisconsin and we will lead you through the wide variety of phosphorus compliance options. MSA's has been educating operators and municipal leaders on phosphorus compliance at numerous regional and state technical conferences since the new regulations were passed in 2010. Teaming with MSA at the beginning of your phosphorus compliance process will help you develop the right solution.

MSA has a track record of helping communities in reducing or eliminating annual chemical costs. Using our Phosphorus Optimization Protocol, MSA was able to save the Village of Holmen more than \$16,000 per year in chemical costs.

Furthermore, we are community financing experts. As a Municipal Financial Advisor registered with the SEC, we are able to provide the City with sound financial advice as they consider improvements to the wastewater infrastructure. MSA prepared five of the seven grant-winning WDNR Clean Water Fund applications in 2013. And MSA clients alone received 75% of all available WDNR principal forgiveness funding for the 2013 Funding Year. Our extensive financial planning knowledge will be an additional benefit of working with our team.

Successful facility planning will be achieved by combining the collective wisdom of the Utility Commission, City operation and engineering staff, and MSA's wastewater expertise. Our job is to listen and learn by asking strategic questions. From this information we can help determine options and provide recommendations for sound future decision making.

Please do not hesitate to contact us for additional information or if you have any questions. Thank you for your time and consideration.

Sincerely,
MSA Professional Services, Inc.

A handwritten signature in blue ink, appearing to read "Bill Chang".

Bill Chang, PE
Wastewater Team Leader

A handwritten signature in blue ink, appearing to read "Chuck Schwartz".

Chuck Schwartz, PE
Municipal Team Leader

Enclosure: Project Experience Sheets

HOLMEN WWTF BIOLOGICAL PHOSPHORUS REMOVAL OPTIMIZATION

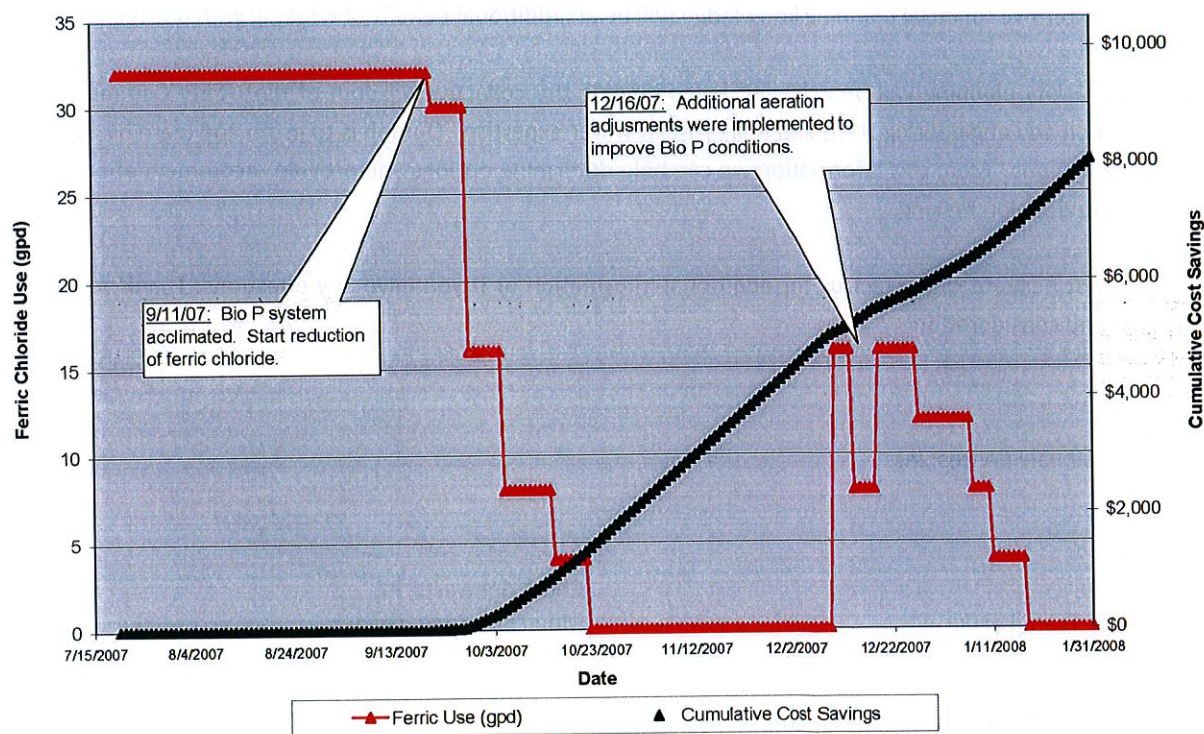
HOLMEN, WI

The Village of Holmen's wastewater treatment facility was not able to remove phosphorus biologically. Phosphorus removal had been achieved through a chemical precipitation process using ferric chloride. The use of ferric chloride has presented a significant operation cost to the Village.

MSA began working with the wastewater operations staff in July 2007 to optimize the biological phosphorus removal system. MSA assisted the plant operations staff in conducting profile testing through the system to get an understanding of where the biological system was deficient. The Village's operation staff completed significant analytical testing from July 2007 through October 2007. The results of the testing indicated the presence of nitrate in the selector tanks that inhibited the bacteria from removing phosphorus.

MSA instructed the operators on process changes to reduce aeration in the treatment tanks, and reduce return activated sludge rates. These changes improved conditions for phosphorus removing bacteria, which allowed the operators to reduce, and eventually eliminate the ferric chloride dosage. The plant was able to maintain effluent phosphorus below permit limits without the use of ferric chloride. It is estimated that the Village will save more than \$16,000 per year in chemical costs. The facility operators now have the tools and knowledge to continue the cost savings.

Ferric Chloride Reduction/Cost Savings



PROJECT EXPERIENCE

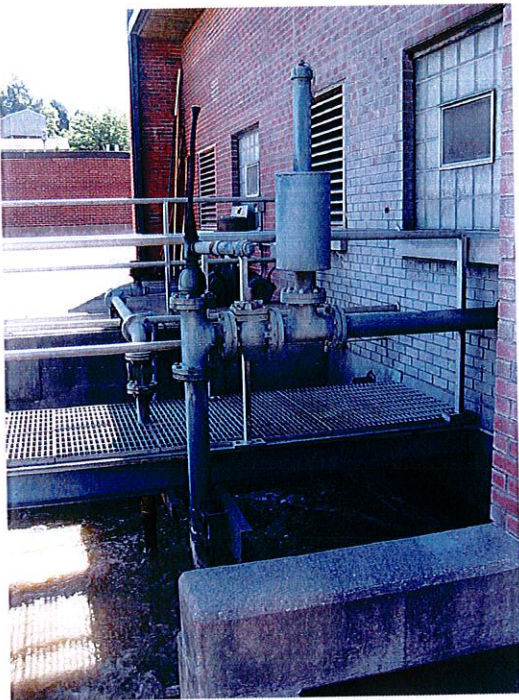
WWTF GRIT

PLATTEVILLE, WI

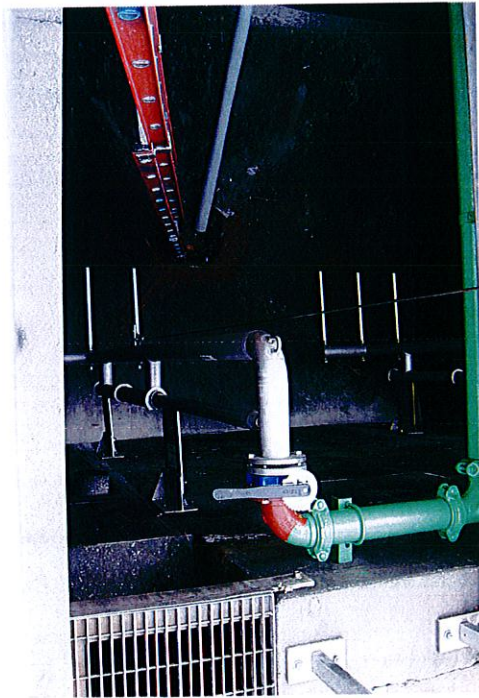
The City of Platteville, Wisconsin experienced operational difficulties associated with grit capture and disposal. The existing aerated grit tank did not capture grit effectively during peak flow events, resulting in grit accumulation in downstream aeration basins and digesters. Due to this, the operational staff was required to periodically remove grit from the aeration basins and digesters. Further, the grit that was captured and removed was not sufficiently washed and cleaned of organics, necessitating landfill disposal.

The City of Platteville partnered with MSA to evaluate improvement options to their grit removal and disposal methods. This evaluation included interactive visits to determine operational criteria for each specific piece of equipment evaluated. Only through such a process could the City be assured that the proposed solution would result in equal or less maintenance than the existing grit removal system.

Upon completion of the evaluation, MSA performed hydraulic modeling of the aerated grit tanks and made recommendations to improve the treatment and removal efficiencies by modifications to the aeration system. Further, the modifications included flooded suction pumps to efficiently remove grit from the grit tanks without daily operator input. Finally, a vortex grit washer was installed that removes 98% of the organics from the grit. This method of grit washing has eliminated the need for the landfill disposal and has promoted a sustainable reuse of the grit.



Existing Aerated Grit Tank



Aerated Grit Tank Aeration Improvements





TO: Utility Commission

FROM: Jeremiah Wendt, Director of Public Works

DATE: May 28, 2015

Re: South Water Tower Reconditioning – Clean Water Fund Loan

Background

Staff has requested a letter proposal from SEH to complete a funding application for a Safe Drinking Water Fund (a state/federally sponsored program administered through Wisconsin DNR) loan that would reimburse the funds used for reconditioning of the South Water Tower. This proposal will be presented at the Utility Commission meeting. Staff do not currently have the capacity to complete this application, as it entails approximately 120 hours of work.

While the utility has cash on hand that could be used to pay for this project, the benefit of using the Safe Drinking Water Fund to finance the project is that the Utility can borrow this money at a subsidized interest rate (currently 1.65%), and use the cash on hand to finance upcoming capital improvement projects. While the loan application represents a significant investment (approximately \$12,000), the interest savings over the life of the loan is approximately \$65,000.

Recommendation

Staff is recommending approval of a contract with SEH to prepare a Safe Drinking Water Fund loan application on the behalf of New Richmond Utilities.

